Important Farmlands

Lea County, New Mexico

U.S. Department of Agriculture
Soil Conservation Service
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The purpose of the Important Farmland Inventory is to determine the extent and location of the best land suited for the production of food, fiber, forage, feed and oilseed crops within Lea County, New Mexico. This inventory was carried out in cooperation with other federal, state and local governmental agencies.

This inventory is not intended to designate the perfect land use. This is the prerogative of the responsible state and local officials. The U. S. Department of Agriculture and the Soil Conservation Service (SCS) are very concerned about the loss of the Nation's prime agricultural land. It is SCS policy to make and keep current an inventory of the Nation's prime and unique farmlands.

It is important to emphasize that prime farmland is one of the most important resources.

This exceptional land can be farmed continuously or nearly continuously without degrading the environment. It responds exceptionally well to fertilizer and other chemical applications with minimum loss of residues by leaching or erosion. It is the most responsive to management and can maintain high levels of consistent production over long periods of time.

The Nation needs to know this information. It provides the basic data for sound management decisions that are needed to protect this most important resource base.

CRITERIA

The criteria used in identifying important farmland in Lea County are related to soil characteristics and the availability of irrigation water. They were set up to facilitate the inventory of the Nation's most productive farm lands in a reasonable time by using existing information.

The Prime Farmland Inventory is dynamic. New areas will be developed and old areas will be converted to irreversible uses. Therefore, the inventory should be updated periodically to reflect any significant changes.

MAPS and DEFINITIONS

PRIME FARMLAND

Prime farmland is that land which has the best combination of physical and chemical characteristics for producing food, fiber, forage and oilseed crops and is available for this use. It has the soil quality, growing season and moisture supply needed to economically produce sustained high yields of these crops when treated and managed properly.

In general, prime farmland has the acceptable levels of alkalinity or acidity, salt and sodium content and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively eroded or saturated with water for long periods of time. They do not flood or they are protected from flooding. They have an adequate moisture supply from precipitation or from irrigation sources and Irrigation Water Management can be practiced in accordance with local acceptable techniques.

Prime farmland in Lea County, New Mexico, meets the following criteria:

1. The soils have an adequate moisture supply. The area has a developed irrigation system that is dependable and of adequate quality to meet moisture requirements eight out of ten years. The soils have four inches or more available water holding capacity within a depth of 40 inches, or within the root zone, if the root zone is less than 40 inches deep.

2. The soils have a soil temperature regime that is thermic. (Mean annual soil temperature at a depth of 20 inches is 59 degrees to 72 degrees F.)

3. The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches or in the root zone if the root zone is less than 40 inches deep.

4. The soils either have no water table, or a water table maintained at a sufficient depth during the cropping season to allow growth of cultivated crops common to the area.

5. The soils can be managed in all horizons within a depth of 40 inches (or in a root zone if the root zone is less than 40 inches deep), so that during part of each year the conductivity of saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 15.

6. The soils are not flooded frequently during the growing season (less often than one in two years).

7. The soils have a product of K (erodibility factor) x percent slope of less than 2.0 and a product of I (soil erodibility) x C (climatic factor) not exceeding 60. That is, prime farmland does not include soils which have a serious erosion hazard.

8. The soils have a permeability rate of at least 0.06 inches per hour in the upper 20 inches.

9. Less than 10 percent of the surface layer (upper six inches) in these soils consists of rock fragments coarser than three inches. These soils present no particular difficulty in cultivating with large equipment.

Prime farmland is shown in green on the Important Farmland Map of Lea County. Approximately 32,821 acres of this type of land are in the county.

UNIQUE FARMLAND

Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce high yields of a specific crop when treated and managed according to modern farming methods.

Unique farmland was not recognized in Lea County.

ADDITIONAL FARMLAND OF STATEWIDE IMPORTANCE

This is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage and oilseed crops. Criteria for defining and delineating this land were determined by state agencies in New Mexico.

The soils in this category are important to agriculture in New Mexico, yet they exhibit some properties that exclude them from prime farmland. Examples of such properties are erodibility, limited rooting zone, seasonal wetness, or moderate amounts of soluble salts. These soils can be farmed satisfactorily by using more fertilizer and chemicals, practicing erosion control and irrigation water management. They produce good crop yields when managed properly.

These are shown in yellow on the Important Farmland Map and make up 64,050 acres in Lea County.

ADDITIONAL FARMLAND OF LOCAL IMPORTANCE

This is land of local importance in the production of food, feed, fiber, forage and oilseed crops. Criteria for defining and delineating this land was determined by local agencies in Lea County.

The soils in this category are important to agriculture in Lea County, yet they exhibit some properties which exclude them from prime farmland or additional farmland of statewide importance in the county. The major property which excludes them from the above categories is the lack of soil moisture. Through the use of modern farming techniques, fair crop yields can be obtained from these soils through dryland production.

These areas are shown in orange on the Important Farmland Map and include 7,209 acres.

OTHER IRRIGATED FARMLAND

The soils in this unit are annexed with the soils in the prime and statewide important units. They have relevant irrigation systems and fair to good productivity. The major limiting factor is soil depth. Soils in this unit are recommended only for farming under a continuous cover farming technique.

Soils included in this unit are shown as crosshatched from right to left and include 10,454 acres.

OTHER DRY FARMLAND

Soils in this unit are intermixed with the locally important soils inasmuch as they cannot be separated but contain the characteristic of being sandy. This causes severe wind erosion problems and in some instances, cultural management problems.

Soils included in this unit are shown as crosshatched from left to right and include 15,100 acres.

OTHER LAND

The white or uncolored area of the Important Farmland Map is classified as other lands. Most of this area is native grassland and is devoted to production of beef products.

WATER

The area shown in blue on the Important Farmland Map are areas which during the year will have sufficient water to be considered in flood condition, which limits their use in agricultural production.

URBAN LAND

These areas are the towns and villages of Lea County. They are shown in gray. Also shown in gray are areas outside of towns and villages which have sufficient density of housing to limit their usefulness for agricultural production.

If additional information on the Important Farmland Inventory of Lea County is desired, please contact:

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